National Transportation Safety Board

Washington, D.C. 20594
Office of Marine Safety

Interview Summary

Accident: Loss of cargo vessel *El Faro* **(**DCA16MM001)

Date: September 23, 2016 about 1300 EDT
Location: Telephone Interview

Person Interviewed: Mr. Dick Norris, Norcom Services Inc.
[redacted]

Interview Conducted By: E. Stolzenberg, NTSB

Summary Provided By: E. Stolzenberg, NTSB

Mr. Norris was interviewed by telephone in conjunction with the Investigation into the loss of the cargo vessel *El Faro* in the Atlantic Ocean near Crooked Island, Bahamas on 1 October, 2016. The interview was limited to his knowledge of the cargo hold bilge alarm system aboard *El Faro*. The text that follows is not a verbatim record of the conversation. It has been developed from hand notes from the phone conversation**.**

Mr. Norris was provided a copy of the below interview summary on 2 November, 2016 for review via email. He replied via email on 2 November, 2016, that the interview summary was correct to the best of his knowledge and recollection.

INTERVIEW SUMMARY

Mr. Stolzenberg stated that the intent of the interview was to ascertain the type of cargo hold bilge alarm system aboard *El Faro* and how it was similar to, or in what way differed from the bilge alarm system recently installed aboard the *El Yunque*. Mr. Stolzenberg stated he had examined the *El Yunque'*s bilge alarm system the day prior to the interview, had measured the locations of stainless alarm sensor-floats, and had briefly documented the system. Mr. Stolzenberg noted that the *El Yunque* had port and starboard level sensors in the 1, 2, 2A, 3 and a single sensor in 5 hold. Mr. Stolzenberg noted the cargo hold sensors were located a few inches above the tank top deck, and not in the adjacent rose boxes sunk below the tank top, where bilge system piping took cargo hold suction. Mr. Stolzenberg also noted that a dedicated bilge alarm panel (mimic board) was located in the Engine Room, forward of the main control station.

Mr. Norris related that the bilge alarm system on *El Faro* was different than that on the *El Yunque*.

He stated that Norcom was the company to install the bilge alarm system aboard *El Yunque* in 2016 in preparation for layup, and he personally installed the bilge alarm system as owner of Norcom. Per Mr. Stolzenberg's assessment, he confirmed that the *El Yunque* system monitored all holds (the port and starboard sides of holds 1, 2, 2A, 3 and the centerline of hold 5) with stainless steel type "floats" that activated the mimic alarm panel found in the Engine Room control area. Mr. Norris related that the float locations for *El Yunque* were not placed in the bilge system rose boxes, but above the tank top per Tote request.

Mr. Norris stated that another company called Nortec Marine had installed the bilge alarm system on the *El Faro* in the early 90's in conjunction with boiler burner management system updates. At that time, he was a part owner in Nortec and was personally involved with the installation. Mr. Norris stated that he is no longer a part owner of Nortec, having left it to his partners. He also said he is no longer involved in Nortec in any capacity and neither he nor NorCom have *El Faro* bilge alarm system drawings.

Mr. Norris recalled that similar to *El Yunque*, the *El Faro* system used stainless bilge float sensors to monitor all holds on both their port and starboard sides, as well one sensor in the engine room (it did not have a sensor in shaft alley). However, unlike *El Yunque* the *El Faro* floats were located within their respective hold's bilge piping system's rose boxes, not above the tank top deck. He generally recalled that rose box size (about 10 gallons) and locations between the *El Yunque* and *El Faro* were similar, but he could not say for certain. He stated the alarm panel, or mimic board for *El Faro* was located near the Engine Room control flat.

Mr. Norris recalled that for a high bilge level alarm to sound on *El Faro* the float had to be up for 5 seconds. This would activate both an engine room-wide audible alarm (horn) and a visual one (comprising of a dedicated indicator light flashing for each specific rose box location) illuminating at the bilge alarm mimic panel in the Engine Room. Once an engine room operator pressed the acknowledge button on the bilge alarm mimic panel, the horn would be silenced and the indicator light would change to solidly lighted from flashing. When the high bilge condition was cleared, the light would go out, rearming the station.

Mr. Norris stated that there was not a bilge alarm panel repeater on the bridge of *El Faro*, and that the Engine Room was the only location for indication of alarms.

Mr. Norris stated that the power for the *El Faro* bilge alarm system was fed from the IC Battery System, therefore no outside power was needed to operate the system.

He thought that the system on *El Faro* was reliable, as he did not recall taking a service call or hearing of problems with the system.

END OF INTERVIEW

E. Stolzenberg
Marine Accident Investigator